

Lateral grey horns

Origin of preganglionic neurons for autonomic nervous system

Parasympathetic nervous system

Controls body most of the time. Promotes digestion, filtration, lower cardiovascular effort.

Sympathetic nervous system

Used only in 'flight or fight', alarm situations. Increases cardiovascular effects (heart rate, blood flow, pressure, etc.), while temporarily slowing down other basal mechanisms (digestion, filtration, etc.)

Chain ganglia

Part of the sympathetic nervous system. 23 ganglia connected on each side of the vertebral column.

Collateral ganglia

Clusters of sympathetic neurons innervating organs within the abdominopelvic cavity.

Celiac ganglia

Sympathetic nervous system. Innervation of stomach, liver, gallbladder, pancreas, and spleen.

Superior mesenteric ganglia

Sympathetic nervous system. Innervation of small intestine and top portion of large intestine.

Inferior mesenteric ganglia

Sympathetic nervous system. Innervation of lower portion of large intestine, kidneys, bladder, sex organs.

Parasympathetic cranial nerves

Oculomotor (III)

Facial (VII)

Glossopharyngeal (IX)

Vagus (X) 75%

Parasympathetic sacral nerves  
S2-S4

Acetylcholine

Neurotransmitter released by preganglionic neurons (sympathetic and parasympathetic).

Neurotransmitter released by parasympathetic postganglionic neurons.

Norepinephrine

Neurotransmitter released by sympathetic postganglionic neurons.

Hormone released by adrenal medulla (into blood) for long-term sympathetic activation.

Nicotinic receptors

Respond to acetylcholine.

Found on dendrites of postganglionic neurons for both sympathetic and parasympathetic pathways.

Found on sarcolemma of skeletal muscles.

Muscarinic receptors

Respond to acetylcholine.

Found on organs targeted by parasympathetic postganglionic neurons.

Alpha or Beta receptors

Respond to norepinephrine and epinephrine.

Found on organs targeted by sympathetic postganglionic neurons.